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(71) Applicant (for all designated States except US): INSYST  
LTD. [IL/IL]; Har Hotzvim, 7 HaMarpe Street, 91231  
Jerusalem (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GOLDMAN,  
Arnold, J. [IL/IL]; 18 HaPalmach Street, 92542 Jerusalem

(IL). HARTMAN, Jehuda [IL/IL]; 18 HaTzanchanim  
Street, 76212 Rehovot (IL). FISHER, Joseph [IL/IL]; 3  
Mishol HeHadas Street, 97277 Jerusalem (IL). SAREL,  
Shlomo [IL/IL]; 151 Ma'ale MichMash, 90634 M.P. Yosh  
(IL).

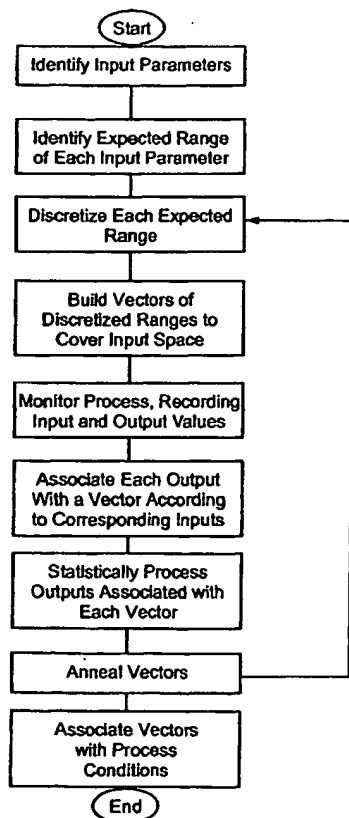
(74) Agent: G. E. EHRLICH (1995) LTD.; 28 Bezalel Street,  
52521 Ramat Gan (IL).

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(54) Title: SYSTEM AND METHOD FOR MONITORING PROCESS QUALITY CONTROL



(57) Abstract: A system and method for monitoring process quality control. A series of input parameters are identified as being significant in effecting the output of a process. Each input parameter has an expected range. Each expected range is discretized into a series of sub-ranges and a vector is built for each possible combination of sub-ranges. The process is then monitored to obtain a statistically significant set of samples, each sample comprising a process output and corresponding inputs (Fig. 2). A knowledge base and model are built (Fig. 5).

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL01/00937

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 7/60, 17/10, 17/50; G06G 7/48

US CL : 703/2, 6, 13

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 703/2, 6, 13

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,866,437 A (CHEN et al.) 02 February 1999 (02.02.1999), Abstract, Figures 2-3, Background of the Invention, Summary of the Invention, col 2, lines 64 et seq.	1-26
X	US 6,125,235 A (PADILLA et al.) 26 September 2000 (26.09.2000), Abstract, Figures 1-6, Background of the Invention, Summary of the Invention, col 5, lines 56 et seq.	1-26
X	US 5,408,405 A (MOZUMDER et al.) 18 April, 1995 (18.04.1995), Abstract, Figures 1-5, Background of the Invention, Summary of the Invention, col 3, lines 4 et seq.	1-26
X	US 5,546,312 A (MOZUMDER et al.) 13 August, 1996 (13.08.1996), Abstract, Figures 1-5, Background of the Invention, Summary of the Invention, col 4, lines 8 et seq.	1-26
X	US 5,966,527 A (KRIVOKAPIC et al.) 12 October, 1999 (12.10.1999), Abstract, Figures 1-7c, Background of the Invention, Summary of the Invention, col.5, lines 58 et seq.	1-26
X	US 5,646,870 A (KRIVOKAPIC et al.) 08 July, 1997 (08.07.1997), Abstract, Figures 1-9B, Background of the Invention, Summary of the Invention, col.7, lines 10 et seq.	1-26
X	US 5,956,251 A (ATKINSON et al.) 21 September 1999 (21.09.1999), Abstract, Figures 1-17, Background of the Invention, Summary of the Invention, col.7, lines 33 et seq.	1-26
X	US 5,781,430 A (TSAI et al.) 14 July 1998 (14.07.1998), Abstract, Figures 1-17, Background of the Invention, Summary of the Invention, col. 3, lines 45 et seq.	1-26



Further documents are listed in the continuation of Box C.



See patent family annex.

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document member of the same patent family

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Facsimile No. (703)305-3230

Authorized officer

William D. Thomson

Telephone No. 703-305-3257

**INTERNATIONAL SEARCH REPORT**

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**Continuation of B. FIELDS SEARCHED Item 3:**

EAST

search terms: model\$, statistic\$, vector, manufact\$, knowledge adj base, anneal, process, discret\$, range

# INTERNATIONAL SEARCH REPORT

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## Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

### NEW ABSTRACT

A system and method for monitoring process quality control. A series of input parameters are identified as being significant in effecting the output of a process. Each input parameter has an expected range. Each expected range is discretized into a series of sub-ranges and a vector is built for each possible combination of sub-ranges. The process is then monitored to obtain a statistically significant set of samples, each sample comprising a process output and corresponding inputs (Fig. 2). A knowledge base and model are built (Fig. 5).